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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

LU, ZHIYU

ART UNIT

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/674,877	Applicant(s) SCHILLING ET AL.	
	Examiner ZHIYU LU	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2 and 4-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2 and 4-12 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☒ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 2, 4-7 and 12 are objected to because of the following informalities:

In claims 2, 4-7 and 12, applicants claim the invention as "Device", in contrast to claiming a system having at least one first unit and at least one second unit mobile.

In claim 12, claim status, e.g. (new), is missing; and is depending from a cancelled claim, claim

1.

Appropriate correction is required.

Specification

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

Paragraph 0024 of published application states at least one micro controller is provided for controlling **or** diagnosing the device. Yet, claim 6 claims a micro controller coupled for controlling **and** diagnosing the device. For examination purpose, the Examiner takes the interpretation of the filed specification.

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Response to Arguments

3. Applicant's arguments with respect to claims 2 and 4-8 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 2, 6-8 and 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Rider (US Patent#5264795).

Regarding claim 2, Rider anticipates device for broadband transmission of digital signals between at least one first unit and at least one second unit mobile along a predetermined path relative to said first unit, via non-contacting rotary joints, wherein said first unit (100 of Figs. 5-6) comprises:

a data source for generating a serial data stream (145 of Fig. 6, column 9 lines 34-37);

a transmitter (170 of Fig. 6) for generating electrical signals from said serial data stream from said data source;

a controller (110 of Fig. 6) coupled between said data source and said transmitter for controlling said serial data stream by converting a data rate or data package size of said data source into a desired value of data rate or data package size, wherein said controller comprises:

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means for storing (ROM/RAM of Fig. 7) data from the serial data stream; and

means for outputting (114, 115, 117-118 of Fig. 7) the stored data to said transmitter in accordance with the desired value of data rate or data package size (column 10 lines 3-45, programmable timer for desired rate); and

a transmitter conductor array (20 of Fig. 5) for conducting said electrical signals generated by said transmitter;

wherein said second unit (200 of Figs. 5-6) comprises:

a receiving antenna (290 of Fig. 6) for tapping electrical signals in the near field of said transmitter conductor array;

a receiver (260 of Fig. 6) for receiving the signals tapped by said receiving antenna; and

a data sink (210 of Fig. 6) for subsequent processing of the signals received by said receiver.

Regarding claim 8, Rider anticipates method of broadband transmission of digital signals between at least one first unit and at least one second unit mobile along a predetermined path relative to said first unit, via non-contacting rotary joints as explained in response to claim 2 above.

Regarding claim 6, Rider anticipates the limitation of claim 2.

Rider anticipates further comprising a micro controller is provided for controlling and diagnosing the device (Processor of Fig. 7).

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Regarding claim 7, Rider anticipates the limitation of claim 1.

Rider anticipates wherein the device is self-learning and adapts itself dynamically to respective conditions of operation, (column 25 lines 7-40).

Regarding claim 12, Rider anticipates the limitation of claim 2.

Rider further comprising a decoder (210 of Fig. 6, 611 of Fig. 14) coupled to or included within said receiver for converting a data rate or data package size of the signals received by said receiver into the data rate or data package size generated by said data source.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 4 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rider (US Patent#5264795) in view of Richley et al. (US Patent#5437057) and Waters et al. (US Patent#6611776).

Regarding claims 4 and 9, Rider teaches the limitations of claims 2 and 8.

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But, Rider does not expressly disclose wherein the desired value is determined by a desired-value generator according to actual transmission characteristics of a data transmission path between said transmitter and said receiver.

Richley et al. teach near field coupling is employed for transferring data back and forth between stations (abstract, Figs. 4-5), which would have been obvious for one of ordinary skill in the art to incorporate into the devices of Rider with modification of near-field transceiver taught by Richley et al., in order to enable two-way communication.

Waters et al. teach a controller is provided for controlling said data stream by signaling a desired value of data rate to said transmitter for short-range wireless communication (4 of Fig. 1, column 3 line 66 to column 4 line 15), which is to inform the transmitter data rate adjustment needed based on the characteristics of the data transmission path.

Despite difference in wireless communication protocols, modification for communication feedback in improving communication quality would have been an obvious feature in wireless communication for one of ordinary skill in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate having controller informed of changing data rate taught by Waters et al. into the device of Rider and Richley et al., in order to maintain or improve communication quality.

Regarding claim 10, Rider, Richley et al., and Waters et al. teach the limitation of claim 9.

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Rider, Richley et al., and Waters et al. teach wherein said step of controlling the serial data stream comprises supplying the desired value of data rate or data package size to said transmitter as explained in response to claim 9 above.

Regarding claim 11, Rider, Richley et al., and Waters et al. teach the limitation of claim 10.

Rider, Richley et al., and Waters et al. teach wherein said step of controlling the serial data stream comprises storing data from the serial data stream if the desired data rate is lower than a rate at which the serial data stream is generated by the data source in said generating step (obvious because a temporary storing is needed for data rate conversion)

6. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rider (US Patent#5264795) in view of Richley et al. (US Patent#5437057) and Marchetto et al. (US Patent#5914959).

Regarding claim 5, Rider teaches the limitation of claim 2.

But, Rider does not expressly disclose further comprising an analyzer coupled between said receiver and said data sink, wherein said analyzer is configured for signaling incorrectly transmitted data to said controller by means of an additional transmission path, and wherein said controller is configured for repeating said incorrectly transmitted data packages upon request by said analyzer.

Richley et al. teach near field coupling is employed for transferring data back and forth between stations (abstract, Figs. 4-5), which would have been obvious for one of ordinary skill in the art

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to incorporate into the devices of Rider with modification of near-field transceiver taught by Richley et al., in order to enable two-way communication.

Marchetto et al. teach an analyzer coupled between said receiver and said data sink, wherein said analyzer is configured for signaling incorrectly transmitted data to said controller by means of an additional transmission path, and wherein said controller is configured for repeating said incorrectly transmitted data packages upon request by said analyzer (abstract, Fig. 2, column 1 line 57 to column 3 line 30).

Despite difference in wireless communication protocols, requesting retransmission for detecting error data for completing data reception would have been an obvious feature in wireless communication for one of ordinary skill in the art.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate having means for requesting retransmission taught by Machetto et al. into the device of Rider and Richley et al., in order to provide resilient communication.

Conclusion

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ZHIYU LU whose telephone number is (571)272-2837. The examiner can normally be reached on Weekdays: 9AM-5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Duc Nguyen can be reached on (571) 272-7503. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Zhiyu Lu/
Examiner, Art Unit 2618

/Z. L./
Examiner, Art Unit 2618

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March 16, 2009

/Duc Nguyen/

Supervisory Patent Examiner, Art Unit 2618